

## Math 112 - Quiz 3

February 22, 2017

Name key

Score \_\_\_\_\_

Show all work to receive full credit. Supply explanations when necessary.

1. (4 points) Which of these sentences are statements? Circle all that apply.

☒ (a) Bill Gates is the founder of Microsoft.

☐ (b) Who will be elected president?

☒ (c)  $12 + 8 = 13$

☒ (d) Leonard Euler was born in 1707.

2. (5 points) Identify each as a conjunction, disjunction, conditional, or biconditional.

(a) All dogs are mammals.

CONDITIONAL

(b) Sara and Brian went hiking in the mountains.

CONJUNCTION

(c) I'm going to pass my math class if and only if I do my homework.

BICONDITIONAL

(d) When your battery dies, you should charge your phone.

CONDITIONAL

(e) Either he makes the shot, or he loses the game.

DISJUNCTION

3. (1 points) Explain why the sentence "This statement is false" is not a statement.

IF IT IS TRUE, IT IS FALSE.

IF IT IS FALSE, IT IS TRUE.

IT CANNOT BE GIVEN A TRUTH VALUE.